Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1-44. (Canceled)

45. (Original) A method of obtaining full-length gene sequences comprising:
   (a) isolating full-length mRNA;
   (b) attaching a DNA tag sequence to the isolated mRNA; and
   (c) synthesizing cDNA using the tagged mRNA as a template.

46-78. (Canceled)

79. (Original) A method of obtaining full-length gene sequences comprising:
   (a) isolating full-length mRNA by employing an affinity purification material;
   (b) decapping and dephosphorylating the isolated mRNA;
   (c) attaching a DNA tag sequence to the decapped, dephosphorylated mRNA, wherein the tag sequence comprises the sequence shown in Figure 11 and is attached by vaccinia DNA topoisomerase;
   (d) synthesizing cDNA using the tagged mRNA as a template;
   (e) amplifying the synthesized cDNA, wherein the amplification primers comprise an anti-coding sequence of the tag sequence (5′) and a gene specific sequence (3′); and

(f) inserting the amplified cDNA into an expression vector.

80. (New) The method of claim 45, wherein the mRNA is isolated by employing an affinity purification material.

81. (New) The method of claim 80, wherein the mRNA to be isolated comprises an affinity purification tagged cap structure.

82. (New) The method of claim 80, wherein the affinity purification tag is a biotin moiety, a chitin binding domain or a glutathione-S-transferase moiety.

83. (New) The method of claim 80, wherein the affinity purification material comprises a solid support complexed with phenylboronic acid, streptavidin, avidin, chitin or glutathione.

84. (New) The method of claim 83, wherein the solid support is magnetic beads or sepharose.

85. (New) The method of claim 45, wherein the mRNA is isolated from plant cells or animal cells.

86. (New) The method of claim 85, wherein the animal cells are mammalian cells or insect cells.

87. (New) The method of claim 45, wherein the mRNA is decapped and dephosphorylated after isolation.

88. (New) The method of claim 87, wherein the mRNA is decapped enzymatically or by chemical treatment.

89. (New) The method of claim 88, wherein the enzyme is a pyrophosphatase.

90. (New) The method of claim 88, wherein the chemical treatment is periodate oxidation or beta elimination.

91. (New) The method of claim 87, wherein the mRNA is dephosphorylated using alkaline phosphatase.

92. (New) The method of claim 45, wherein the DNA tag sequence comprises a recognition site for a type I topoisomerase.

93. (New) The method of claim 92, wherein the DNA tag sequence further comprises a recognition site for a site-specific restriction endonuclease.

94. (New) The method of claim 92, wherein the type I topoisomerase is vaccinia DNA topoisomerase.

95. (New) The method of claim 92, wherein the DNA tag sequence comprises the double stranded sequence shown in Figure 11, wherein N represents an adenosine moiety, a guanosine moiety, a cytosine moiety or a thymidine moiety.

96. (New) The method of claim 95, wherein N is 1-4 nucleotide bases.

97. (New) The method of claim 95, wherein vaccinia DNA topoisomerase is covalently bound to the double stranded sequence.

98. (New) The method of claim 45, further comprising amplifying the synthesized cDNA wherein the amplification primers comprise an anti-coding sequence of the tag sequence (5') and a gene specific sequence (3').

99. (New) The method of claim 98, further comprising inserting the amplified cDNA into an expression vector.

100. (New) The method of claim 45, wherein the DNA tag sequence is a linearized expression vector.